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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/296,217	04/22/99	BURTS	B 23267/15D1
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EXAMINER

CROSS, L

ART UNIT

PAPER NUMBER

1743

DATE MAILED: 05/10/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/296,217

Applicant(s)

Burts

Examiner

LaToya Cross

Group Art Unit

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☒ Responsive to communication(s) filed on Dec 14, 1999

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-13 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-13 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 4

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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DETAILED ACTION

This Office Action is in response to Applicants' amendments filed on December 14, 1999 and entered as Paper No. 5. It appears that Applicants have inadvertently put the wrong title on their amendment and response. There are at least four pending applications in the Office which are quite similar. Applicants are asked to be careful in making sure that the serial number and title are correct when filing responses to assure that papers are matched with files correctly and in timely fashions. Claims 1-13 are pending in the instant application.

Status of Rejections from Previous Office Action

The rejection of claims 3 and 6 under 35 U.S.C. 112, second paragraph is withdrawn in view of Applicants' amendment to the claim to correct the Markusch language.

The rejection of claims 1, 2, and 7 under 35 U.S.C. 102b as being anticipated by Sydansk '673 is withdrawn in view of Applicants' arguments concerning that Sydansk fails to teach a dry mixture of components.

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686

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F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321© may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1-13 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-13 of copending Application No. 09/296,216. Although the conflicting claims are not identical, they are not patentably distinct from each other because while the instant claims recite “lost circulation additive” and the claims of the copending application recite “conformance additive”, both additives comprise the same components. While the preamble appears to be different, it is known in the art that the types of compositions claimed by Applicants are suitable for both conformance fluids and lost circulation fluids. The two additives are essentially the same.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

3. Claims 1-13 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-13 of copending Application No. 08/962,209. Although the conflicting claims are not identical, they are not patentably distinct from each other because while the instant claims recite “lost circulation additive” and the claims of the copending application recite “tubing/casing plug additive”, both additive comprise the same

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components. While the preamble appears to be the same, it is known in the art that these types of additives are suitable for both lost circulation and tubing/casing plugging.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

4. Claims 1-13 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-13 of copending Application No. 09/307,544. Although the conflicting claims are not identical, they are not patentably distinct from each other because while the instant claims recite “lost circulation additive” and the claims of the copending application recite “well plug additive”, the additives comprise the same components. While the preamble appears to be different, it is known that these types of additives are suitable for both lost circulation and well plugging.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 1, 2, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 4,989,673 to Sydansk (hereinafter referred to as Sydansk ‘673).

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Applicants' claimed invention is directed to a lost circulation additive comprising a dry mixture of a water soluble cross-linkable polymer, a cross linking agent, and a reinforcing material selected from fibers and comminuted plant material.

Sydansk '673 teaches a cross linked gel which functions as a lost circulation fluid by coating and plugging the wellbore face to prevent flow of fluids across a face (col. 7, lines 6-8). The cross linked gel comprises a water soluble polymer and a cross linking agent. See abstract. The water soluble polymer is a carboxylate containing polymer having one or more carboxylate groups (col. 3, lines 24-36). A preferred water soluble polymer of Sydansk '673 is partially hydrolyzed polyacrylamide, such as recited in instant claim 7 (col. 3, lines 37-54). The cross linking agent is a chromic carboxylate complex, such as recited in instant claim 2 (col. 3, lines 55-64). Sydansk '673 also teaches the additional use of inert solids, such as sand, fiberglass, cellulosic fibers, and plastic fibers to enhance the strength of the gel formed by the polymers and cross linking agents (col. 6, lines 57-61).

Sydansk '673 differ from the instantly claimed invention in that Sydansk does not appear to teach a dry mixture of water soluble crosslinkable polymer, crosslinking agent, and reinforcing material. However, Applicants state at page 27, lines 17-21 and page 28, lines 1-6 that either or both of the crosslinking agent and polymer may be utilized as a solution. It is noted that Applicants prefer mixing the components as a dry mixture before contact with water, but it is believed that the conformance fluid of Sydansk '673 where the crosslinking agent and polymer are

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used as a solution are not substantially different from those of Applicants' where the components are dry mixed and then added to water based fluids.

Therefore, for the reasons set forth above, Applicants' claimed invention is deemed to be obvious, within the meaning of 35 U.S.C. 103, in view of the teachings of Sydansk '673.

7. Claims 1-4, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,377,760 to Merrill (herein referred to as Merrill '760).

Applicants claimed invention is directed to a lost circulation additive comprising a dry mixture of a water soluble cross-linkable polymer, a cross linking agent, and a reinforcing material selected from fibers and comminuted plant material.

Merrill '760 discloses gels capable of blocking or plugging relatively large openings in permeable formations. The gels of Merrill '760 also useful in improving the conformance of formations encountered in the drilling and production of hydrocarbons from subterranean wells (col. 1, lines 12-16). The gels of Merrill '760 comprise a partially hydrolyzed carboxylate-containing polymer and a chromic carboxylate complex as a cross linking agent, such as recited in instant claim 2. The preferred hydrolyzed polymer is a partially hydrolyzed polyacrylamide polymer, such as recited in instant claim 7 (col. 2, lines 63-68). Merrill '760 also discloses the use of reinforcing materials which are incorporated into the gels. These reinforcing materials include hydrophilic fibers and hydrophobic fibers. The hydrophilic fibers are those such as glass, cellulose, carbon, silicon, graphite, coke, cotton fibers, and mixtures. The hydrophobic fibers are

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those such as nylon, rayon, hydrocarbon fibers, and mixtures, such as recited in instant claim 3 (col. 4, lines 14-25).

Merrill '760 differs from the instantly claimed invention in that there is no specific teaching to the combined use of both hydrophilic and hydrophobic reinforcing materials.

However, since both of the reinforcing materials are disclosed as being used for the same purpose of enhancing the gels formed from the hydrolyzed polymers and cross linking agents, it would have been obvious to one of ordinary skill in the art to combine the two types of reinforcing materials. Absent evidence to the contrary, the use of both types of reinforcing materials (hydrophilic and hydrophobic) would result in an effective additive for use as a lost circulation additive.

Therefore, for the reasons set forth above, Applicants' claimed invention is deemed to be obvious within the meaning of 35 U.S.C. 103, in view of the teachings of Merrill '760.

Claims 1, 2, and 5-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 5,004,553 to House et al (herein referred to as House et al '553) in view of U.S. Patent 3,208,524 to Horner et al (herein referred to as Horner et al '524).

Applicants claimed invention is directed to a lost circulation additive comprising a dry mixture of a water soluble cross-linkable polymer, a cross linking agent, and a reinforcing material selected from fibers and comminuted plant material.

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House et al '553 disclose seepage loss fluids for well working applications. The fluids of House et al '553 comprise a combination of reinforcing materials such as oat hulls, corn cobs, cotton, citrus pulp, and cotton burrs. House et al '553 also disclose the conventional use of particulates of peanuts, almond, cocoa bean, cottonseed, rice, cotton linters, wool, paper, straw, wood fibers, etc. (col. 2, lines 7-27). House et al '553 disclose the use of the reinforcing particulate material in combination with a crosslinkable polymer (col. 5, lines 1-5). House et al '553 discloses suitable crosslinkable polymer as those described in U.S. Patent 4,722,397 to Sydansk (col. 20-38). The crosslinkable polymers of Sydansk '397 comprise a water soluble carboxylate containing polymer and a cross linking agent such as chromic carboxylate complex, such as instantly claimed by Applicants. (See abstract of Sydansk '397.) The use of the cross linkable polymer in combination with the reinforcing particulate materials form a plugging agent for boreholes (col. 5, lines 1-9). House et al '553 further disclose the preparation of the fluids by adding the seepage loss additives to water based well working fluids (col. 5, lines 39-68 and col. 6, lines 1-25).

House et al '553 differ from the instantly claimed invention in that there is no disclosure of the use of cellophane in the seepage loss additives. There is also no disclosure of the use of the fluids of House et al '553 as conformance additives.

Horner et al '524 teach loss circulation fluids similar to those disclosed by House et al '553 in that they comprise crosslinkable polymers. Horner et al '524 teach the employment of bulking agents into the polymer gels to reduce the amount of gel required and to permit the

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plugging of large fissures which might otherwise be difficult to plug (col. 5, lines 42-48). As bulking agents, Horner et al '524 discloses cellophane and a variety of other fibrous, flaky or granular materials.

Thus, in view of the teaching of the use of cellophane in combination with other fibrous, flaky or granular materials in loss circulation additives for well working fluids, it would have been obvious to one of ordinary skill in the art to employ cellophane as an additional component of the loss circulation additive of House et al '553. One of ordinary skill in the art would expect that the addition of cellophane to the fluids of House et al '553 would result in a loss circulation additive similar to that instantly claimed by Applicants, absent evidence to the contrary.

With respect to House et al '553 not teaching the use of those fluids as conformance additives, it is known in the art that fluids such as those disclosed by House et al '553 are useful in improving conformance.

Therefore, for the reasons set forth above, Applicants' instantly claimed invention is deemed to be obvious within the meaning of 35 U.S.C. 103, in view of the teachings of House et al '553 and in view of Horner et al '524.

Response to Arguments

8. Applicant's arguments filed February 8, 2000 have been fully considered but they are not persuasive.

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Applicants' arguments concerning all of the rejections set forth in the previous Office Action (Sydansk '673, Merrill '760, and House et al '553/Horner et al '524) are directed to the fact that the references incorporate water into their additives prior to mixing, whereas Applicants dry mix the components prior to contact with the water based fluids. While this may be a difference in Applicants' claimed additives and the additives of the prior art, it is the position of the Examiner that this difference is not substantial enough to support patentability. Applicants contact their dry-mixed components with water based fluids in order to make a conformance fluid suitable for use in drilling operation. The prior art teach the essentially the same components which are also mixed with water based fluids to result in conformance fluids for drilling operations. Applicants have not shown that additives which are dry mixed prior to contact with water result in a better conformance fluid than those of the prior art wherein water is incorporated in with the components of the additive. Applicants' dry mixed additives cannot be used as a conformance fluid in drilling operations unless mixed with water. Thus, it is believed that the conformance fluids instantly claimed are not patentably distinct from those which are disclosed in the prior art.

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Citation of Relevant Prior Art

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 4,566,979 to Githens discloses a dry mixture of a crosslinking compound and a hydratable gelling agent, wherein the dry mixture is storage stable.

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to LaToya I. Cross whose telephone number is (703) 305-7360. The examiner can normally be reached on Monday through Friday from 8:00 a.m. to 4:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden, can be reached at (703) 308-4037. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-5408.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

LIC

May 5, 2000


Jill Warden
Supervisory Patent Examiner
Technology Center 1700